Update Regarding Pension Obligation Bonds

September 2008

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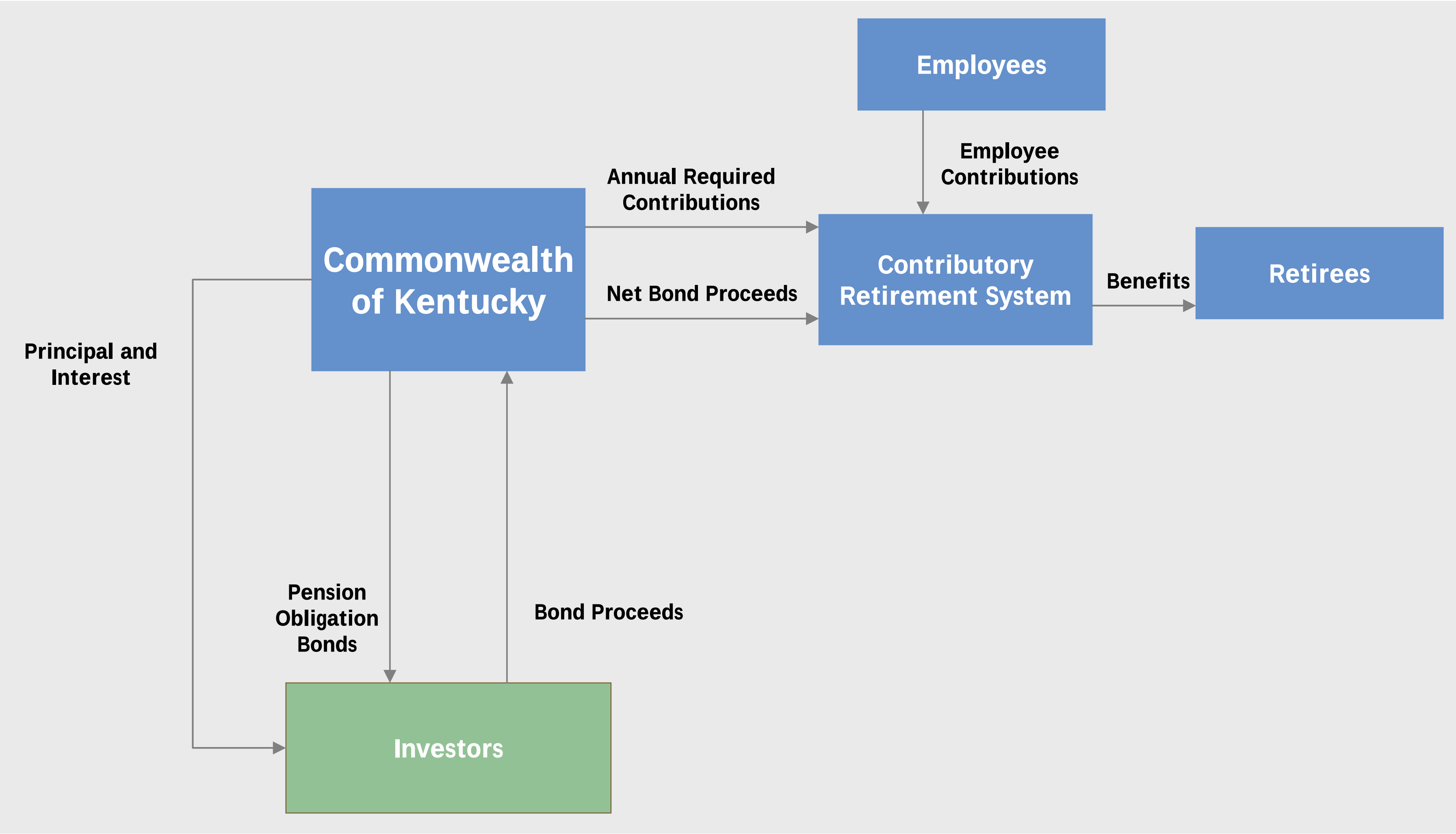
What are POBs?

- POBs are debt instruments issued by a governmental entity to fund all or a portion of the Unfunded Actuarially Accrued Liabilities (“UAAL”) for pension and/or Other Post Employment Benefits (“OPEB”).
- POBs convert a soft balance sheet liability to a hard balance sheet liability.
- Ultimate goal of POB is to lower funding cost for system

POB Mechanics



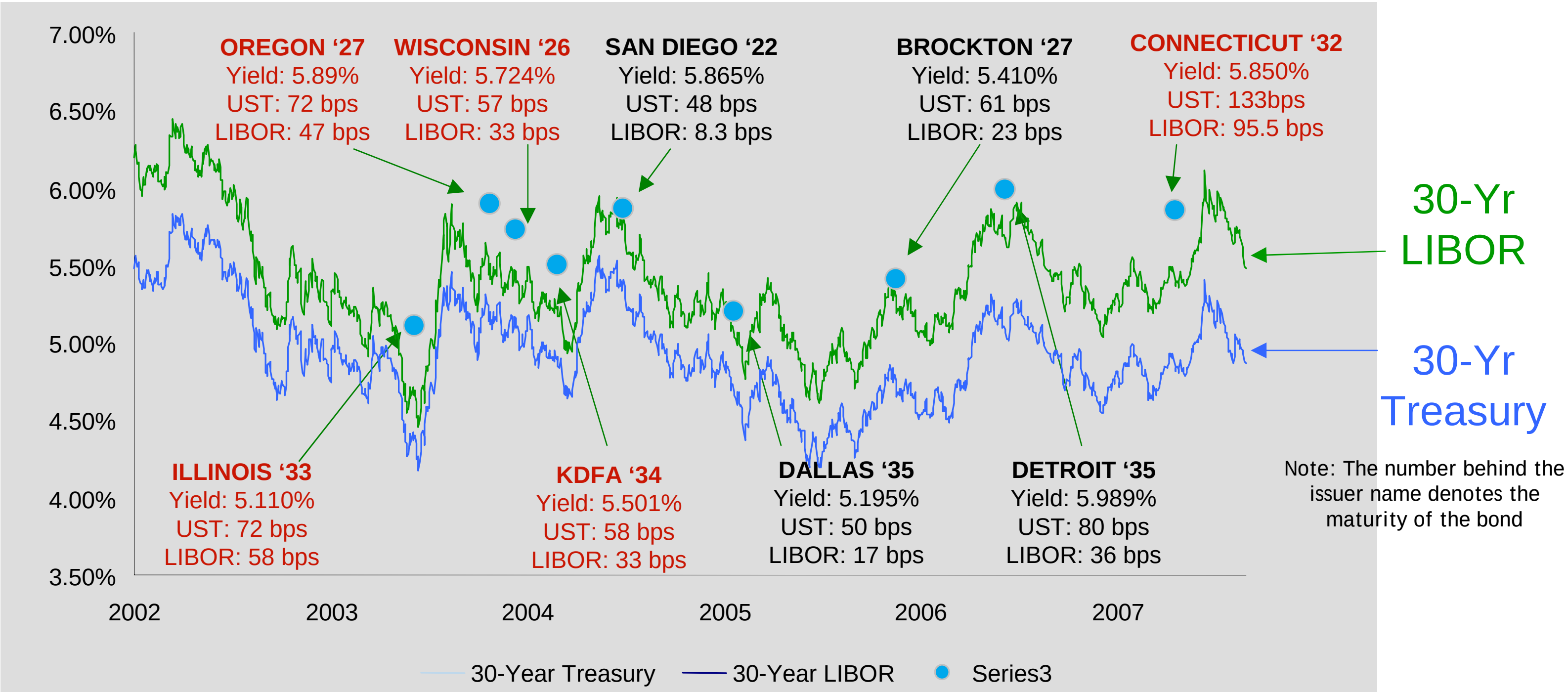
Who has issued POBs?

Year(s) Issued	Size ($mm)	Issuing Entity
State-level Entities		
1997	2,803	New Jersey
1996	773	NYS Dorm Authority
2002	1,795	Wisconsin
2003	10,000	Illinois
2004	500	Kansas
2002, 2003, 2004, 2005	2,628	Oregon School Boards Association
2008	1,589	Puerto Rico
2008	2,277	Connecticut
Pending	5,000	Alaska
Pending	200	Virgin Islands
Local Entities		
1986	461	Los Angeles Co-California
1994	1,965	Los Angeles County
1999	1,292	Philadelphia
2005	1,440	Detroit
2008	750	Denver Public Schools
2008	1,937	Chicago Transit Authority
Pending	400	Milwaukee County
Pending	400	Houston

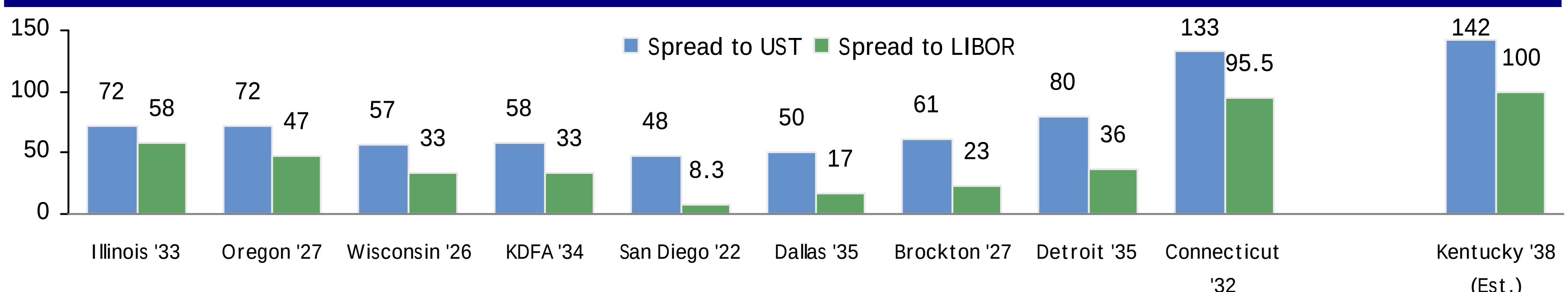
- Over 400 POB issues have been executed for a total par amount of $57.6 billion since 1986

Current Market Update

Credit spreads have widened for both municipals and corporates as risk is re-evaluated



Comparison of Spreads at Pricing to Appropriate Benchmark



Source: Final Pricing Wires

Current Market Update (continued)

- Broad investor demand both domestically and in Europe.
- Estimated all-in taxable 20-year funding cost of ~ 5.76%.
- Level Debt Service per $100 million borrowed:
  - 10 years = ~ $13.3 million annually
  - 20 years = ~ $8.60 million annually
- If actuarial investment returns of 7.50% can be achieved, the Commonwealth would realize 1.74% or $1.74 million in annual contribution savings ($34.8 million aggregate expected savings) per $100 million issued.

Benefits

- Provides cash to the Retirement Systems to invest now to lower the unfunded liability and meet future benefit payments.
- Discipline to budget annual debt service payments to cover the new obligation.
- Expected annual funding cost reductions between 15%-30% due to the difference between actuarial assumed (expected) return versus interest paid on the bonds.

Concerns and Risks

- The primary risk is that the actual return on the purchased investments is less than the cost of the debt over the life of the bonds.

- Reduced budget and financial flexibility in the event of an economic downturn that could impact other service levels.

Concerns and Risks (continued)

- Cannot be issued on a tax-exempt basis under the Internal Revenue Code.
- Need to be cognizant of crowding out capital projects
  - Be aware of debt capacity issues for budgetary planning
  - Note that POBs will be sold to different investors than those who buy the Commonwealth's tax-exempt bonds

Risks Associated with POBs

- Market Risk
- Political Risk
- Financial Risk
- Investment Risk

Risks Associated with POBs

Expected Savings Disclosure: *Expected savings from a pension obligation or OPEB bond issue are based on actuarial assumptions for investment returns. A failure to meet investment returns will impact both the expected economics of the transaction and the unfunded balance of the entire system. JPMorgan can make no representation regarding the validity of the actuarial assumptions based on the actual investment allocations.*

Market Risk

- Investment returns need to exceed the interest rate on the bonds for the life of the debt (see investment risk below) to have positive financial results
- A pension bond transaction can only be viewed as a success or failure once the bonds are retired, not over the short term
- Issuing POBs when interest rates are low increases the potential for the return proceeds to exceed the cost of the debt
- Due to many factors, a UAAL may arise subsequent to the issuance of Pension Bonds
  - Revisit initial analysis to determine appropriate funding methodology for the new UAAL

Political Risk

- Poor investment returns can result in negative publicity. Good investment returns can result in an over funding of the system which could lead to political pressure to increase benefits.
- For many issuers of Pension Bonds, the POBs are their largest and most highly publicized bond offering
- Critics will emphasize the potential negative implications, despite many positive merits
  - Refinancing existing obligation
  - Generating expected savings over life of liability
  - Increasing strength of pension system
- Long-term nature of program must be maintained

Financial Risk

- Pension Bonds convert a soft liability into a hard liability. This will increase the reported debt burden for the Commonwealth, potentially reducing borrowing capacity
- All things being equal, Rating Agencies view Pension Bonds as a ratings neutral event
- The issuance of Pension Bonds should be considered within the overall context of the Commonwealth's financial situation
  - What is the impact on the Commonwealth's debt capacity?
  - The Bonds will be subject to appropriation
  - Will the POBs "crowd out" other infrastructure needs?
  - How will the fixed debt service cost impact the Commonwealth's budgetary flexibility?
  - What is the pattern of expected savings?
  - What is the expected funding level for the system?
  - How do the actuarial assumptions of the system compare to industry average?

Investment Risk

- A Pension Bond offering will generate significant proceeds to be invested at one time
- Short-term volatility in invested assets may impact the long-term viability of the structure
- Investors and rating agencies will want to be assured that the system has a sound plan for investment of funds
- The Commonwealth and the retirement system need to be coordinated with regard to the philosophy of reinvestment, including weighting the costs/benefits to alternative investment strategies

Rating Views

- The benchmark funding level for public pension funds is approximately 80% given the continuously moving assumptions associated with these liabilities.
- There are no real benchmarks for OPEB liabilities at the present time, due to limited reporting and volatility of these liabilities.
- A goal to steadily increase the percentage of the OPEB Annually Required Contribution would be viewed favorably.

Rating Views (continued)

- Pension/OPEB Bonds can be part of the solution:
  - Conversion of soft liability to a hard liability.
  - Will POBs debt service crowd out other pressing needs?
  - **Will there be checks and balances to avoid a return to inadequate funding levels?**
  - Has the state conducted a probability analysis that the assumed levels of return can be achieved versus fixed funding cost?

Rating Views (continued)

- Use of proceeds is the key issue: pay current benefits, i.e. a payment holiday?
- POBs will be included in the state's Net Tax Supported Debt computation by all three of the rating agencies.
  - Can the Commonwealth afford POBs and maintain existing rating?
- **Use of POBs alone should not result in a rating action if the funding plan is sound and well communicated.**

POB Issuance – Best Practices

- GFOA Recommended Practices
  - Legal authorization
  - Prudent funding of pension plans
  - Evaluation of risk
  - Provide adequate disclosure
  - In-depth financial analysis
  - Review of actuarial assumptions and projections

POB Issuance – Best Practices

- Market-Driven Recommended Practices: Multiple Actuaries
  - A number of states have an actuary on retainer to review proposed retirement legislation
    - E.g., Arkansas, Nebraska and Oklahoma
  - The use of multiple actuaries is standard practice in the United Kingdom. Each plan has its own actuary and an additional actuary is retained to represent the public interest
    - This concept is currently being explored by the actuarial profession in the United States
  - Increases confidence both internally and externally due to additional set of eyes

Accrued State Liability for KTRS Health Benefit Costs

- A refinancing of the “loans” from KTRS Pension System made for medical benefits shares some similarities to traditional POBs, as both would be issued in the taxable bond market
- These “loans” could be refinanced with bonds at lower interest costs
- The proceeds from the bond deal would be used to replenish the KTRS pension system

Potential Application of POBs: KTRS Pension System Provides “Loans” to Fund Medical Benefits

	FY 2005	FY 2006	FY 2007		FY 2008	FY 2009 Estimated	FY 2010 Estimated
Amount "Borrowed" from Pension Fund	**$29.2**	**$62.3**	**$73.0**	*****	**$125.0**	**$125.0**	**$125.0**
Cumulative Borrowing		**$91.5**	**$164.5**		**$289.5**	**$414.5**	**$539.5**
(Amortized over 10 Years at 7.5%)							
Total Cost of "Loans" from Pension Fund	**$0.0**	**$4.2**	**$13.3**		**$23.9**	**$42.1**	**$60.3**

* $12 million from the FY 2006 General Fund Surplus reduced the borrowed amount.

- By refinancing these “loans” over a 10-year amortization, the Commonwealth could realize an interest cost of 5.37% (10-year rate) in the current market compared to the 7.50% rate it charges itself
- The Commonwealth could also consider modifying the term of this financing to meet other financial and policy goals

Future Considerations

- May require legislative action (enabling legislation and appropriation)
- **Issue debt only when borrowing rate achieves funding goals**
- Comprehensive actuarial review required
- Incorporate POBs into comprehensive funding plan
- Develop asset allocation strategy for new funds (both short-term and long-term)
- Design bond repayment structure
- Identify key bond/product tools
- Consider regular, independent performance reviews

Summary

- POBs are a viable tool for funding a portion of the Commonwealth’s pension liabilities.
- POBs are not a silver bullet, but…
- If used as part of a comprehensive plan, and all other things being equal, POBs should not reduce the state’s credit rating.

Appendix

Pension obligation bonds carry distinct credit implications

Impact on Credit

- Issuing POBs demonstrates a firm commitment to funding pensions which can be a sign of sound financial planning provided that they are accompanied by a clear POB plan with attainable actuarial and investment assumptions and a conservative structure
- However, rating agencies also evaluate the leverage added by POBs. Does it convert a soft liability into a hard liability (bond debt service)? And will this increase the debt burden and potentially reduce borrowing capacity?
- The issuance of pension bonds will be considered within the overall context of the Issuer's financial situation
  - Has the Commonwealth measured its aggregate liability?
  - What is the impact on the Issuer's debt capacity?
  - What is the security backing the Bonds?
  - *Will the POBs "crowd out" other capital needs?*
  - How will the fixed debt service cost impact the Commonwealth's budgetary flexibility?
  - What is the pattern of expected savings?
  - What is the expected funding level for the system?
  - How do the actuarial assumptions of the system compare to industry average?
- All things being equal, rating agencies view pension bonds as a ratings neutral event since they merely transfer a liability from one portion of the balance sheet to another

Source: Standard & Poor's www.ratingsdirect.com – *Pension Obligation Bonds Are Surging After Brief Hiatus,* published 1/20/2004

Moody's View of POBs (11/16/04)

- "Moody's believes the issuance of pension obligation bonds is one effective way of addressing an unfunded liability. Since POBs reduce the cost of funding an unfunded liability, their issuance is not by itself a credit weakness. However, the planning and analysis conducted by a local government as part of the decision to grant expanded benefits, the government's plan for funding any unfunded pension liability, and its ability and willingness to budget appropriately for any attendant higher costs, are reflective of the quality of the government's overall financial management."

Source: Moody's www.moodys.com

Pension obligation bonds carry distinct credit implications (continued)

S&P's Recent Credit View Update (1/23/2008)

- In their latest report on POBs S&P states that "POBs could have a negative impact on credit quality if they were structured poorly."
- The following bullets provide a brief summary of S&P's views with respect to the rating process, as expressed in the January 23, 2008 update
- "In our analysis of POBs, we focus on the bonds' effect on the issuer's debt structure and the ability to meet obligations."
- "The Financial review includes the impact on both the balance sheet and the operating statement or cash flows. The status of the issuer's pension trust fund on a pro forma basis is also part of the review."
- From the balance sheet perspective S&P evaluates:
  - How the POBs fit into the issuer's total debt structure?
  - How much leverage is added through the issuance of POBs?
  - **Can subpar investment returns put upward pressure on pension contribution rates and higher contribution rates together with POB debt service strain the issuer's budget?**
  - Does the POB issue have an impact on statutory debt limits or does it impede debt issuance for any capital plans?
- From a cash flow standpoint S&P evaluates:
  - Projected debt service and contribution costs, with and without POBs
  - The validity of the POB transactions underlying assumptions such as interest cost and investment returns
- "As part of the POB analysis, we also review the status of the pension trust fund, which receives the bond proceeds:
  - What is the statutory and regulatory relationship between the issuer/employer and the pension fund?
  - How have the laws and precedents for contributing affected funding progress, and how do they play into the POB strategy?
  - What are the funding goals and how will the POB affect these objectives?"